



Noble Energy (Rockies)

Garfield County, CO (NAD 83)

Sec. 35-T7S-R95W (BM 35C PAD)

BM 35-31C

BM 35-31C

Plan: BM 35-31C Proposal 2.0

Standard Proposal Report

14 February, 2010



HALLIBURTON

Sperry Drilling Services

Project: Garfield County, CO (NAD 83)
Site: Sec. 35-T7S-R95W (BM 35C PAD)
Well: BM 35-31C
Wellbore: BM 35-31C
Plan: BM 35-31C Proposal 2.0

Noble Energy (Rockies)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00
935.32	10.28	92.20	931.65	-2.35	61.27	1.50	92.20	-2.35
6514.58	10.28	92.20	6421.35	-40.55	1056.19	0.00	0.00	-40.55
7199.90	0.00	2.43	7103.00	-42.90	1117.46	1.50	180.00	-42.90
11299.90	0.00	2.43	11203.00	-42.90	1117.46	0.00	0.00	-42.90

BM 35-31C

WELL DETAILS: BM 35-31C

Ground Level:	9233.00
Latitude	39° 23' 56.200 N
Longitude	107° 57' 59.474 W
Northing	1579657.40
Easting	2303072.60

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
7151.00	7247.90	Williams Fork
8133.00	8229.90	Top of Gas
9694.00	9790.90	Cameo
10067.00	10163.90	Rollins
10415.00	10511.90	Cozzette
10712.00	10808.90	Corcoran
10953.00	11049.90	Mancos

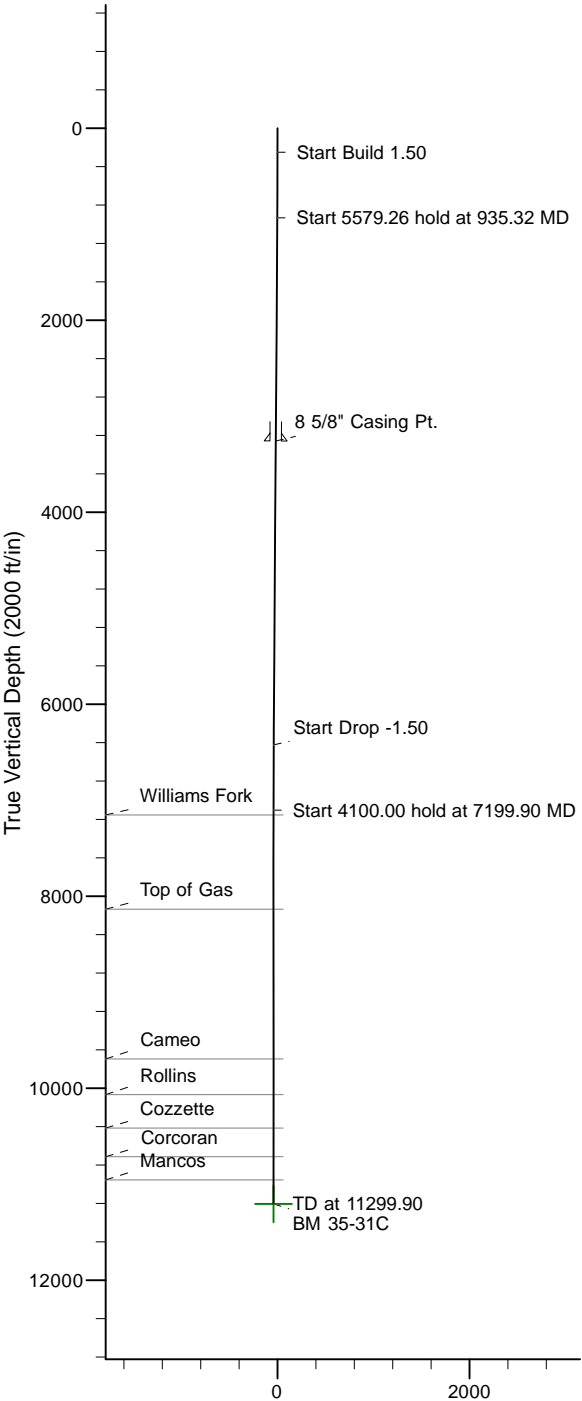
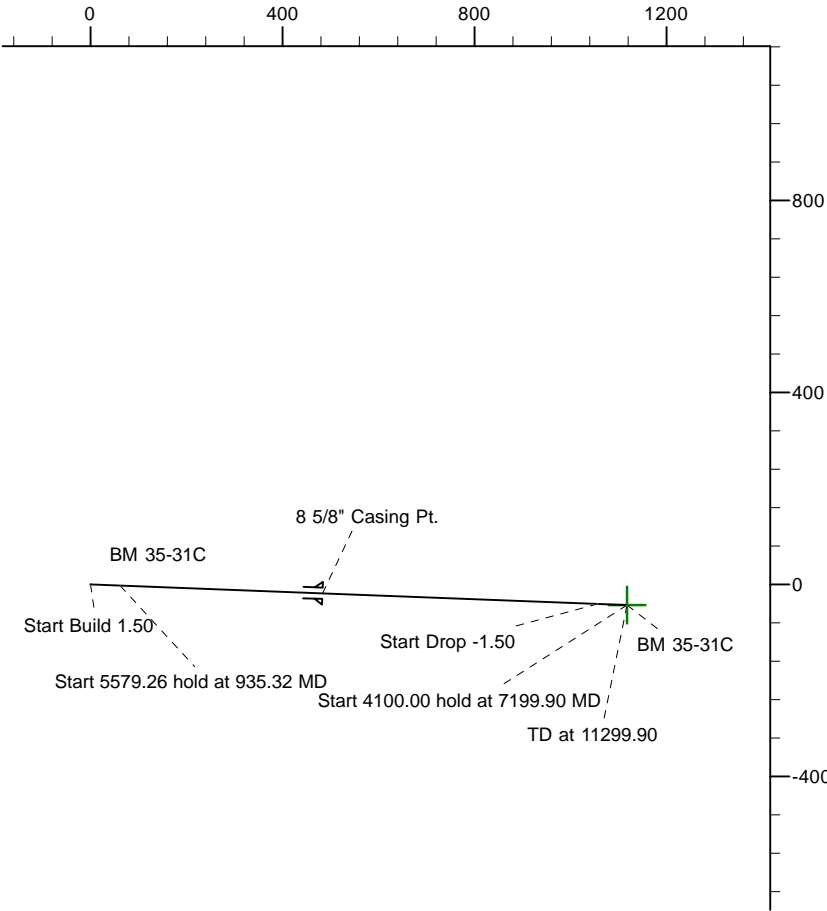


Azimuths to Grid North
True North: 1.56°
Magnetic North: 12.11°
Magnetic Field
Strength: 52369.9snT
Dip Angle: 65.74°
Date: 8/25/2009
Model: BGGM2009

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BM 35-31C	11203.00	-42.90	1117.46	Point

West(-)/East(+) (400 ft/in)



ANNOTATIONS

TVD	MD	Annotation
250.00	250.00	Start Build 1.50
931.65	935.32	Start 5579.26 hold at 935.32 MD
6421.35	6514.58	Start Drop -1.50
7103.00	7199.90	Start 4100.00 hold at 7199.90 MD
11203.00	11299.90	TD at 11299.90

PROJECT DETAILS: Garfield County, CO (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

Plan: BM 35-31C Proposal 2.0 (BM 35-31C/BM 35-31C)

Created By: Bart Goff Date: 10/18/2009
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-31C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-31C		
Design:	BM 35-31C Proposal 2.0		

Project	Garfield County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	Sec. 35-T7S-R95W (BM 35C PAD)				
Site Position:		Northing:	1,579,611.24 ft	Latitude:	39° 23' 55.737 N
From:	Map	Easting:	2,303,047.45 ft	Longitude:	107° 57' 59.778 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	-1.56 °

Well	BM 35-31C					
Well Position	+N/-S	0.00 ft	Northing:	1,579,657.40 ft	Latitude:	39° 23' 56.200 N
	+E/-W	0.00 ft	Easting:	2,303,072.60 ft	Longitude:	107° 57' 59.474 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	9,233.00 ft

Wellbore	BM 35-31C				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	8/25/2009	10.56	65.74	52,370

Design	BM 35-31C Proposal 2.0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVD System ft	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Tool Face (°)
0.00	0.00	0.00	0.00	-9,257.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	-9,007.00	0.00	0.00	0.00	0.00	0.00	0.00
935.32	10.28	92.20	931.65	-8,325.35	-2.35	61.27	1.50	1.50	0.00	92.20
6,514.58	10.28	92.20	6,421.35	-2,835.65	-40.55	1,056.19	0.00	0.00	0.00	0.00
7,199.90	0.00	2.43	7,103.00	-2,154.00	-42.90	1,117.46	1.50	-1.50	0.00	180.00
11,299.90	0.00	2.43	11,203.00	1,946.00	-42.90	1,117.46	0.00	0.00	0.00	0.00

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-31C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-31C		
Design:	BM 35-31C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS -9,257.00	Vert Section
0.00	0.00	0.00	0.00	-9,257.00	0.00	0.00	1,579,657.40	2,303,072.60	0.00	0.00
100.00	0.00	0.00	100.00	-9,157.00	0.00	0.00	1,579,657.40	2,303,072.60	0.00	0.00
200.00	0.00	0.00	200.00	-9,057.00	0.00	0.00	1,579,657.40	2,303,072.60	0.00	0.00
250.00	0.00	0.00	250.00	-9,007.00	0.00	0.00	1,579,657.40	2,303,072.60	0.00	0.00
Start Build 1.50										
300.00	0.75	92.20	300.00	-8,957.00	-0.01	0.33	1,579,657.39	2,303,072.93	1.50	-0.01
400.00	2.25	92.20	399.96	-8,857.04	-0.11	2.94	1,579,657.29	2,303,075.54	1.50	-0.11
500.00	3.75	92.20	499.82	-8,757.18	-0.31	8.17	1,579,657.09	2,303,080.77	1.50	-0.31
600.00	5.25	92.20	599.51	-8,657.49	-0.61	16.01	1,579,656.79	2,303,088.61	1.50	-0.61
700.00	6.75	92.20	698.96	-8,558.04	-1.02	26.46	1,579,656.38	2,303,099.06	1.50	-1.02
800.00	8.25	92.20	798.10	-8,458.90	-1.52	39.50	1,579,655.88	2,303,112.10	1.50	-1.52
900.00	9.75	92.20	896.87	-8,360.13	-2.12	55.13	1,579,655.28	2,303,127.73	1.50	-2.12
935.32	10.28	92.20	931.65	-8,325.35	-2.35	61.27	1,579,655.05	2,303,133.87	1.50	-2.35
Start 5579.26 hold at 935.32 MD										
1,000.00	10.28	92.20	995.29	-8,261.71	-2.80	72.80	1,579,654.61	2,303,145.40	0.00	-2.80
1,100.00	10.28	92.20	1,093.69	-8,163.31	-3.48	90.64	1,579,653.92	2,303,163.23	0.00	-3.48
1,200.00	10.28	92.20	1,192.08	-8,064.92	-4.16	108.47	1,579,653.24	2,303,181.06	0.00	-4.16
1,300.00	10.28	92.20	1,290.48	-7,966.52	-4.85	126.30	1,579,652.55	2,303,198.89	0.00	-4.85
1,400.00	10.28	92.20	1,388.87	-7,868.13	-5.53	144.13	1,579,651.87	2,303,216.73	0.00	-5.53
1,500.00	10.28	92.20	1,487.26	-7,769.74	-6.22	161.97	1,579,651.18	2,303,234.56	0.00	-6.22
1,600.00	10.28	92.20	1,585.66	-7,671.34	-6.90	179.80	1,579,650.50	2,303,252.39	0.00	-6.90
1,700.00	10.28	92.20	1,684.05	-7,572.95	-7.59	197.63	1,579,649.81	2,303,270.22	0.00	-7.59
1,800.00	10.28	92.20	1,782.45	-7,474.55	-8.27	215.46	1,579,649.13	2,303,288.05	0.00	-8.27
1,900.00	10.28	92.20	1,880.84	-7,376.16	-8.96	233.29	1,579,648.44	2,303,305.88	0.00	-8.96
2,000.00	10.28	92.20	1,979.24	-7,277.76	-9.64	251.13	1,579,647.76	2,303,323.71	0.00	-9.64
2,100.00	10.28	92.20	2,077.63	-7,179.37	-10.33	268.96	1,579,647.07	2,303,341.55	0.00	-10.33
2,200.00	10.28	92.20	2,176.03	-7,080.97	-11.01	286.79	1,579,646.39	2,303,359.38	0.00	-11.01
2,300.00	10.28	92.20	2,274.42	-6,982.58	-11.70	304.62	1,579,645.71	2,303,377.21	0.00	-11.70
2,400.00	10.28	92.20	2,372.82	-6,884.18	-12.38	322.46	1,579,645.02	2,303,395.04	0.00	-12.38
2,500.00	10.28	92.20	2,471.21	-6,785.79	-13.06	340.29	1,579,644.34	2,303,412.87	0.00	-13.06
2,600.00	10.28	92.20	2,569.61	-6,687.39	-13.75	358.12	1,579,643.65	2,303,430.70	0.00	-13.75
2,700.00	10.28	92.20	2,668.00	-6,589.00	-14.43	375.95	1,579,642.97	2,303,448.54	0.00	-14.43
2,800.00	10.28	92.20	2,766.40	-6,490.60	-15.12	393.79	1,579,642.28	2,303,466.37	0.00	-15.12
2,900.00	10.28	92.20	2,864.79	-6,392.21	-15.80	411.62	1,579,641.60	2,303,484.20	0.00	-15.80
3,000.00	10.28	92.20	2,963.19	-6,293.81	-16.49	429.45	1,579,640.91	2,303,502.03	0.00	-16.49
3,100.00	10.28	92.20	3,061.58	-6,195.42	-17.17	447.28	1,579,640.23	2,303,519.86	0.00	-17.17
3,200.00	10.28	92.20	3,159.98	-6,097.02	-17.86	465.12	1,579,639.54	2,303,537.69	0.00	-17.86
3,300.00	10.28	92.20	3,258.37	-5,998.63	-18.54	482.95	1,579,638.86	2,303,555.52	0.00	-18.54
8 5/8" Casing Pt.										
3,400.00	10.28	92.20	3,356.77	-5,900.23	-19.23	500.78	1,579,638.17	2,303,573.36	0.00	-19.23
3,500.00	10.28	92.20	3,455.16	-5,801.84	-19.91	518.61	1,579,637.49	2,303,591.19	0.00	-19.91
3,600.00	10.28	92.20	3,553.56	-5,703.44	-20.60	536.45	1,579,636.81	2,303,609.02	0.00	-20.60
3,700.00	10.28	92.20	3,651.95	-5,605.05	-21.28	554.28	1,579,636.12	2,303,626.85	0.00	-21.28
3,800.00	10.28	92.20	3,750.35	-5,506.65	-21.96	572.11	1,579,635.44	2,303,644.68	0.00	-21.96
3,900.00	10.28	92.20	3,848.74	-5,408.26	-22.65	589.94	1,579,634.75	2,303,662.51	0.00	-22.65

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Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-31C		
Design:	BM 35-31C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS -5,309.87	Vert Section
4,000.00	10.28	92.20	3,947.13	-5,309.87	-23.33	607.78	1,579,634.07	2,303,680.35	0.00	-23.33
4,100.00	10.28	92.20	4,045.53	-5,211.47	-24.02	625.61	1,579,633.38	2,303,698.18	0.00	-24.02
4,200.00	10.28	92.20	4,143.92	-5,113.08	-24.70	643.44	1,579,632.70	2,303,716.01	0.00	-24.70
4,300.00	10.28	92.20	4,242.32	-5,014.68	-25.39	661.27	1,579,632.01	2,303,733.84	0.00	-25.39
4,400.00	10.28	92.20	4,340.71	-4,916.29	-26.07	679.11	1,579,631.33	2,303,751.67	0.00	-26.07
4,500.00	10.28	92.20	4,439.11	-4,817.89	-26.76	696.94	1,579,630.64	2,303,769.50	0.00	-26.76
4,600.00	10.28	92.20	4,537.50	-4,719.50	-27.44	714.77	1,579,629.96	2,303,787.33	0.00	-27.44
4,700.00	10.28	92.20	4,635.90	-4,621.10	-28.13	732.60	1,579,629.27	2,303,805.17	0.00	-28.13
4,800.00	10.28	92.20	4,734.29	-4,522.71	-28.81	750.44	1,579,628.59	2,303,823.00	0.00	-28.81
4,900.00	10.28	92.20	4,832.69	-4,424.31	-29.50	768.27	1,579,627.91	2,303,840.83	0.00	-29.50
5,000.00	10.28	92.20	4,931.08	-4,325.92	-30.18	786.10	1,579,627.22	2,303,858.66	0.00	-30.18
5,100.00	10.28	92.20	5,029.48	-4,227.52	-30.87	803.93	1,579,626.54	2,303,876.49	0.00	-30.87
5,200.00	10.28	92.20	5,127.87	-4,129.13	-31.55	821.77	1,579,625.85	2,303,894.32	0.00	-31.55
5,300.00	10.28	92.20	5,226.27	-4,030.73	-32.23	839.60	1,579,625.17	2,303,912.16	0.00	-32.23
5,400.00	10.28	92.20	5,324.66	-3,932.34	-32.92	857.43	1,579,624.48	2,303,929.99	0.00	-32.92
5,500.00	10.28	92.20	5,423.06	-3,833.94	-33.60	875.26	1,579,623.80	2,303,947.82	0.00	-33.60
5,600.00	10.28	92.20	5,521.45	-3,735.55	-34.29	893.10	1,579,623.11	2,303,965.65	0.00	-34.29
5,700.00	10.28	92.20	5,619.85	-3,637.15	-34.97	910.93	1,579,622.43	2,303,983.48	0.00	-34.97
5,800.00	10.28	92.20	5,718.24	-3,538.76	-35.66	928.76	1,579,621.74	2,304,001.31	0.00	-35.66
5,900.00	10.28	92.20	5,816.64	-3,440.36	-36.34	946.59	1,579,621.06	2,304,019.14	0.00	-36.34
6,000.00	10.28	92.20	5,915.03	-3,341.97	-37.03	964.43	1,579,620.37	2,304,036.98	0.00	-37.03
6,100.00	10.28	92.20	6,013.43	-3,243.57	-37.71	982.26	1,579,619.69	2,304,054.81	0.00	-37.71
6,200.00	10.28	92.20	6,111.82	-3,145.18	-38.40	1,000.09	1,579,619.01	2,304,072.64	0.00	-38.40
6,300.00	10.28	92.20	6,210.21	-3,046.79	-39.08	1,017.92	1,579,618.32	2,304,090.47	0.00	-39.08
6,400.00	10.28	92.20	6,308.61	-2,948.39	-39.77	1,035.76	1,579,617.64	2,304,108.30	0.00	-39.77
6,500.00	10.28	92.20	6,407.00	-2,850.00	-40.45	1,053.59	1,579,616.95	2,304,126.13	0.00	-40.45
6,514.58	10.28	92.20	6,421.35	-2,835.65	-40.55	1,056.19	1,579,616.85	2,304,128.73	0.00	-40.55
Start Drop -1.50										
6,600.00	9.00	92.20	6,505.56	-2,751.44	-41.10	1,070.48	1,579,616.30	2,304,143.03	1.50	-41.10
6,700.00	7.50	92.20	6,604.53	-2,652.47	-41.65	1,084.82	1,579,615.75	2,304,157.36	1.50	-41.65
6,800.00	6.00	92.20	6,703.83	-2,553.17	-42.10	1,096.56	1,579,615.30	2,304,169.10	1.50	-42.10
6,900.00	4.50	92.20	6,803.41	-2,453.59	-42.45	1,105.70	1,579,614.95	2,304,178.24	1.50	-42.45
7,000.00	3.00	92.20	6,903.19	-2,353.81	-42.70	1,112.23	1,579,614.70	2,304,184.77	1.50	-42.70
7,100.00	1.50	92.20	7,003.11	-2,253.89	-42.85	1,116.15	1,579,614.55	2,304,188.69	1.50	-42.85
7,199.90	0.00	2.43	7,103.00	-2,154.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	1.50	-42.90
Start 4100.00 hold at 7199.90 MD										
7,200.00	0.00	2.43	7,103.10	-2,153.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
7,247.90	0.00	2.43	7,151.00	-2,106.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Williams Fork										
7,300.00	0.00	2.43	7,203.10	-2,053.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
7,400.00	0.00	2.43	7,303.10	-1,953.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
7,500.00	0.00	2.43	7,403.10	-1,853.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
7,600.00	0.00	2.43	7,503.10	-1,753.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
7,700.00	0.00	2.43	7,603.10	-1,653.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
7,800.00	0.00	2.43	7,703.10	-1,553.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-31C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-31C		
Design:	BM 35-31C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS -1,453.90	Vert Section
7,900.00	0.00	2.43	7,803.10	-1,453.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,000.00	0.00	2.43	7,903.10	-1,353.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,100.00	0.00	2.43	8,003.10	-1,253.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,200.00	0.00	2.43	8,103.10	-1,153.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,229.90	0.00	2.43	8,133.00	-1,124.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Top of Gas										
8,300.00	0.00	2.43	8,203.10	-1,053.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,400.00	0.00	2.43	8,303.10	-953.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,500.00	0.00	2.43	8,403.10	-853.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,600.00	0.00	2.43	8,503.10	-753.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,700.00	0.00	2.43	8,603.10	-653.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,800.00	0.00	2.43	8,703.10	-553.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
8,900.00	0.00	2.43	8,803.10	-453.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,000.00	0.00	2.43	8,903.10	-353.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,100.00	0.00	2.43	9,003.10	-253.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,200.00	0.00	2.43	9,103.10	-153.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,300.00	0.00	2.43	9,203.10	-53.90	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,400.00	0.00	2.43	9,303.10	46.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,500.00	0.00	2.43	9,403.10	146.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,600.00	0.00	2.43	9,503.10	246.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,700.00	0.00	2.43	9,603.10	346.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,790.90	0.00	2.43	9,694.00	437.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Cameo										
9,800.00	0.00	2.43	9,703.10	446.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
9,900.00	0.00	2.43	9,803.10	546.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,000.00	0.00	2.43	9,903.10	646.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,100.00	0.00	2.43	10,003.10	746.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,163.90	0.00	2.43	10,067.00	810.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Rollins										
10,200.00	0.00	2.43	10,103.10	846.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,300.00	0.00	2.43	10,203.10	946.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,400.00	0.00	2.43	10,303.10	1,046.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,500.00	0.00	2.43	10,403.10	1,146.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,511.90	0.00	2.43	10,415.00	1,158.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Cozzette										
10,600.00	0.00	2.43	10,503.10	1,246.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,700.00	0.00	2.43	10,603.10	1,346.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,800.00	0.00	2.43	10,703.10	1,446.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
10,808.90	0.00	2.43	10,712.00	1,455.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Corcoran										
10,900.00	0.00	2.43	10,803.10	1,546.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
11,000.00	0.00	2.43	10,903.10	1,646.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
11,049.90	0.00	2.43	10,953.00	1,696.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
Mancos										
11,100.00	0.00	2.43	11,003.10	1,746.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-31C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-31C		
Design:	BM 35-31C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS 1,846.10	Vert Section
11,200.00	0.00	2.43	11,103.10	1,846.10	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
11,299.90	0.00	2.43	11,203.00	1,946.00	-42.90	1,117.46	1,579,614.50	2,304,190.00	0.00	-42.90
BM 35-31C										

Targets									
Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)
BM 35-31C	- plan hits target center	- Point	0.00	2.43	11,203.00	-42.90	1,117.46	1,579,614.50	2,304,190.00

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
3,300.00	3,258.37	8 5/8" Casing Pt.	8-5/8	11	

Formations							
Measured Depth (ft)	Vertical Depth (ft)	Vertical Depth SS ft	Name	Lithology	Dip (°)	Dip Direction (°)	
8,229.90	8,133.00		Top of Gas				
10,808.90	10,712.00		Corcoran				
10,163.90	10,067.00		Rollins				
7,247.90	7,151.00		Williams Fork				
11,049.90	10,953.00		Mancos				
9,790.90	9,694.00		Cameo				
10,511.90	10,415.00		Cozzette				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
250.00	250.00	0.00	0.00	Start Build 1.50	
935.32	931.65	-2.35	61.27	Start 5579.26 hold at 935.32 MD	
6,514.58	6,421.35	-40.55	1,056.19	Start Drop -1.50	
7,199.90	7,103.00	-42.90	1,117.46	Start 4100.00 hold at 7199.90 MD	
11,299.90	11,203.00	-42.90	1,117.46	TD at 11299.90	

Sperry Drilling

Anticollision Summary Report

Company:	Noble Energy (Rockies)	Local Co-ordinate Reference:	Well BM 35-31C
Project:	Garfield County, CO (NAD 83)	TVD Reference:	RKB - 24' @ 9257.00ft
Reference Site:	Sec. 35-T7S-R95W (BM 35C PAD)	MD Reference:	RKB - 24' @ 9257.00ft
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	BM 35-31C	Database:	.Sperry EDM .16 PRD
Reference Design:	BM 35-31C Proposal 2.0	Offset TVD Reference:	Offset Datum

Reference	BM 35-31C Proposal 2.0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,329.99ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	2/14/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,299.90	BM 35-31C Proposal 2.0 (BM 35-31C)	MWD	MWD - Standard	

Sperry Drilling

Anticollision Summary Report

Company:	Noble Energy (Rockies)	Local Co-ordinate Reference:	Well BM 35-31C
Project:	Garfield County, CO (NAD 83)	TVD Reference:	RKB - 24' @ 9257.00ft
Reference Site:	Sec. 35-T7S-R95W (BM 35C PAD)	MD Reference:	RKB - 24' @ 9257.00ft
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	BM 35-31C	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	BM 35-31C	Database:	.Sperry EDM .16 PRD
Reference Design:	BM 35-31C Proposal 2.0	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Sec. 35-T7S-R95W (BM 35C PAD)						
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	200.00	203.00	30.07	29.45	47.956 CC	
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	300.00	303.00	30.22	29.15	28.239 ES	
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	600.00	602.51	39.86	37.44	16.491 SF	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	200.00	200.00	12.07	11.45	19.453 CC	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	214.82	214.81	12.09	11.40	17.618 ES	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	400.00	399.65	16.62	15.11	11.018 SF	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	200.00	200.00	24.41	23.79	39.351 CC	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	300.00	300.05	24.58	23.52	23.137 ES	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	500.00	499.51	32.67	30.71	16.696 SF	
BM 35-21C - BM 35-21C - BM 35-21C Proposal 2.0	200.00	200.00	38.71	38.09	62.399 CC, ES	
BM 35-21C - BM 35-21C - BM 35-21C Proposal 2.0	11,299.90	11,166.39	1,327.39	1,278.29	27.034 SF	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	105.31	108.32	51.65	51.42	217.017 CC, ES	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	600.00	596.52	84.57	82.12	34.546 SF	
BM 35-22A - BM 35-22A - BM 35-22A Proposal 2.0	200.00	200.00	75.01	74.39	120.912 CC, ES	
BM 35-22A - BM 35-22A - BM 35-22A Proposal 2.0	2,100.00	2,053.82	420.41	409.76	39.486 SF	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	200.00	200.00	67.49	66.87	108.792 CC, ES	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	800.00	783.93	126.19	122.77	36.843 SF	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	200.00	200.00	60.06	59.44	96.814 CC	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	300.00	299.65	60.35	59.30	57.476 ES	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	900.00	890.79	111.65	107.74	28.519 SF	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	200.00	200.00	9.44	8.82	15.220 CC	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	300.00	300.05	9.54	8.48	8.994 ES	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	400.00	400.05	11.23	9.74	7.516 SF	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	707.11	709.04	16.14	13.28	5.655 CC	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	800.00	802.25	16.47	13.18	5.007 ES	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	1,200.00	1,202.82	24.18	17.73	3.749 SF	
BM 35-31D - BM 35-31D - BM 35-31D Proposal 2.0	300.00	300.03	7.45	6.40	7.101 CC, ES	
BM 35-31D - BM 35-31D - BM 35-31D Proposal 2.0	11,299.90	11,289.36	287.39	223.17	4.475 SF	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	100.00	103.00	13.60	13.41	71.077 CC, ES	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	800.00	802.31	35.98	32.39	10.016 SF	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	200.00	200.00	37.50	36.88	60.456 CC	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	300.00	300.00	37.65	36.59	35.406 ES	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	11,299.90	11,344.41	1,000.77	935.78	15.400 SF	
BM 35-32C - BM 35-32C - BM 35-32C Proposal 2.0	200.00	200.00	45.02	44.40	72.575 CC	
BM 35-32C - BM 35-32C - BM 35-32C Proposal 2.0	200.00	200.00	45.02	44.40	72.574 ES	
BM 35-32C - BM 35-32C - BM 35-32C Proposal 2.0	11,299.90	11,387.92	1,316.43	1,251.09	20.146 SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Sperry Drilling

Anticollision Summary Report

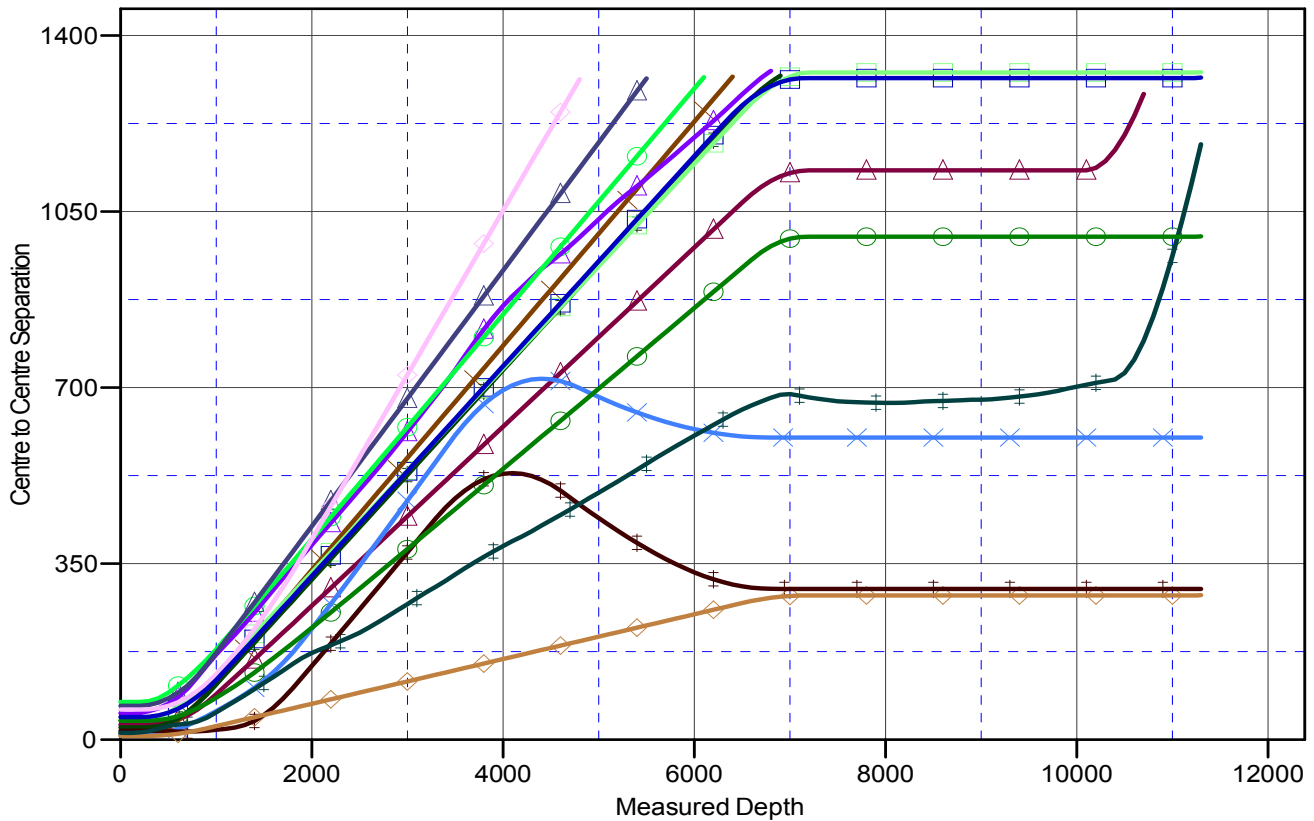
Company: Noble Energy (Rockies)
Project: Garfield County, CO (NAD 83)
Reference Site: Sec. 35-T7S-R95W (BM 35C PAD)
Site Error: 0.00ft
Reference Well: BM 35-31C
Well Error: 0.00ft
Reference Wellbore: BM 35-31C
Reference Design: BM 35-31C Proposal 2.0

Local Co-ordinate Reference: Well BM 35-31C
TVD Reference: RKB - 24' @ 9257.00ft
MD Reference: RKB - 24' @ 9257.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: .Sperry EDM .16 PRD
Offset TVD Reference: Offset Datum

Reference Depths are relative to RKB - 24' @ 9257.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W °

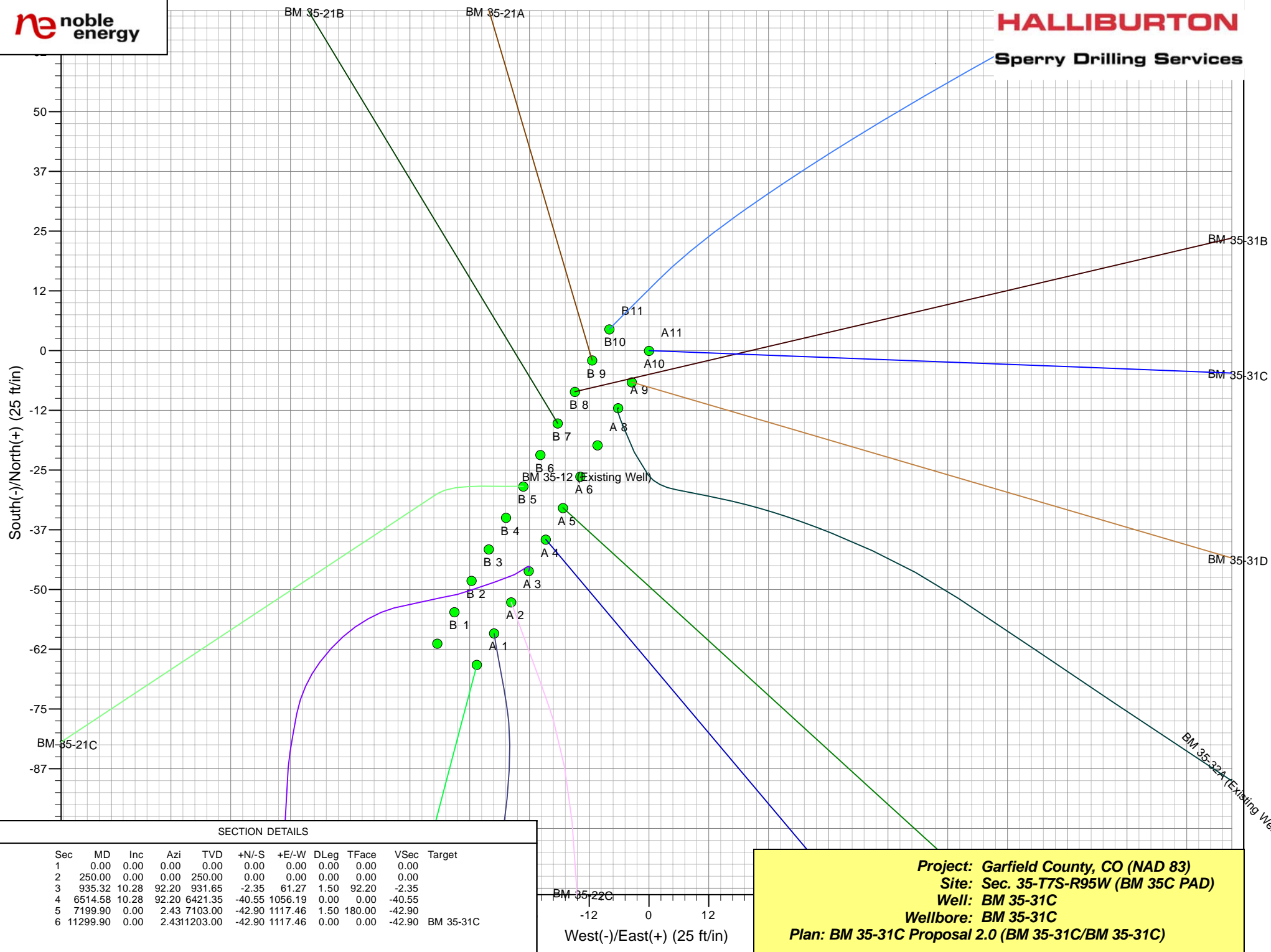
Coordinates are relative to: BM 35-31C
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.56°

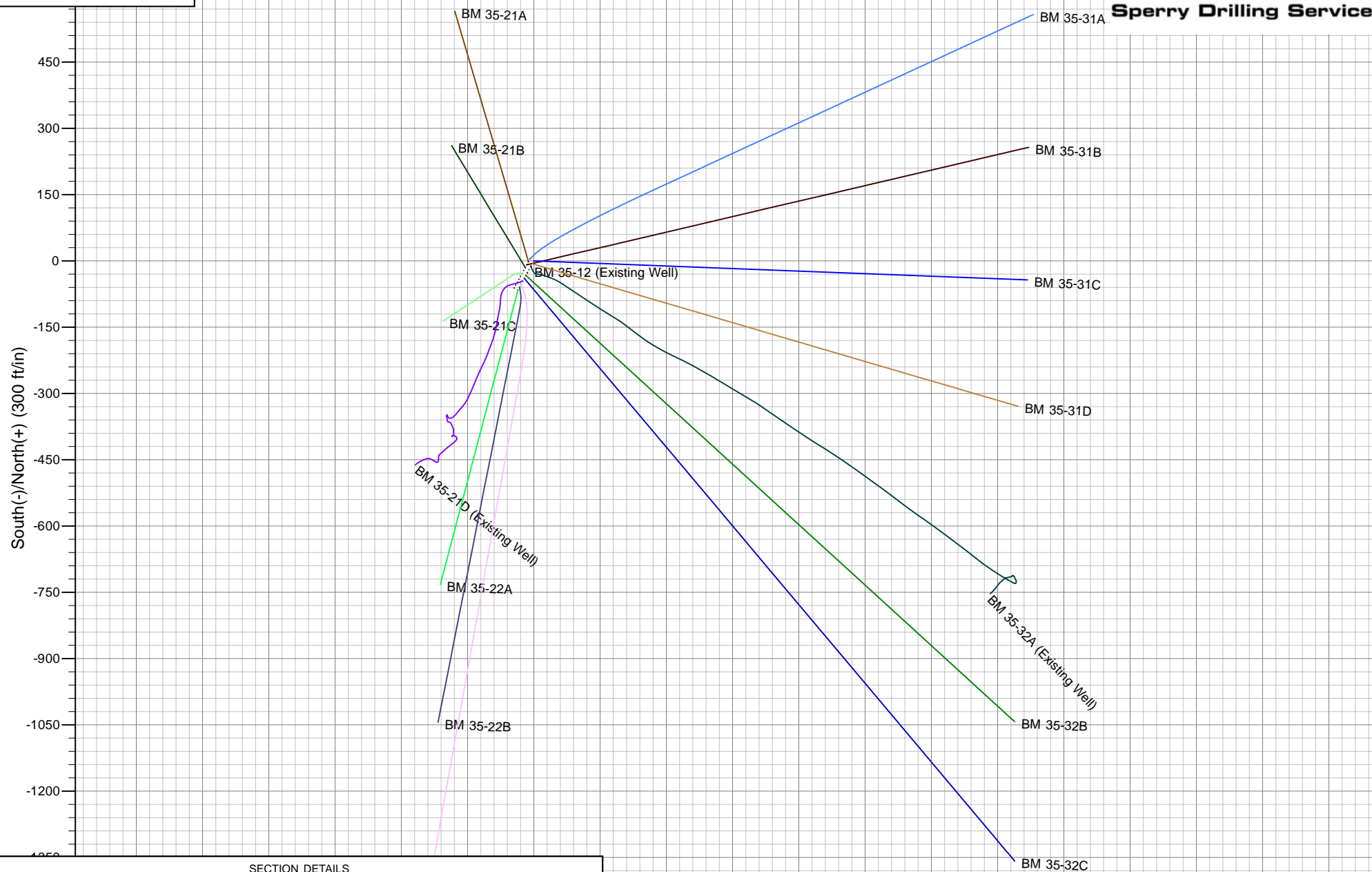
Ladder Plot



LEGEND

2 (Existing Well), BM 35-12, Plan #1 Proposal V0	BM 35-22A, BM 35-22A, BM 35-22A Proposal 2.0 V0	BM 35-31D, BM 35-31D, BM 35-31D Proposal 2.0 V0
1A, BM 35-21A, BM 35-21A Proposal 2.0 V0	BM 35-22B, BM 35-22B, BM 35-22B Proposal 2.0 V0	BM 35-32A (Existing Well), BM 35-32A, BM 35-32A Proposal 2.0 V0
1B, BM 35-21B, BM 35-21B Proposal 2.0 V0	BM 35-22C, BM 35-22C, BM 35-22C Proposal 2.0 V0	BM 35-32B, BM 35-32B, BM 35-32B Proposal 2.0 V0
1C, BM 35-21C, BM 35-21C Proposal 2.0 V0	BM 35-31A, BM 35-31A, BM 35-31A Proposal 2.0 V0	BM 35-32C, BM 35-32C, BM 35-32C Proposal 2.0 V0
1D (Existing Well), BM 35-21D, BM 35-21D V0	BM 35-31B, BM 35-31B, BM 35-31B Proposal 2.0 V0	





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	935.32	10.28	92.20	931.65	-2.35	61.27	1.50	92.20	-2.35	
4	6514.58	10.28	92.20	6421.35	-40.55	1056.19	0.00	0.00	-40.55	
5	7199.90	0.00	2.43	7103.00	-42.90	1117.46	1.50	180.00	-42.90	
6	11299.90	0.00	2.43	11203.00	-42.90	1117.46	0.00	0.00	-42.90	BM 35-31C

0 300 450 600
West(-)/East(+) (300 ft/in)

Project: Garfield County, CO (NAD 83)
Site: Sec. 35-T7S-R95W (BM 35C PAD)
Well: BM 35-31C
Wellbore: BM 35-31C
Plan: BM 35-31C Proposal 2.0 (BM 35-31C/BM 35-31C)